

Course Outline:

1. **Introduction to Production Systems:** Types of production system; Operations Strategy and Competitiveness; Product Design and Process Selection; Types of Layout; Job Design and Work Measurement; Project management.
2. **Forecasting:** Forecasting in Operations; Useful Forecasting Models for Operations; Selection of Forecasting Models.
3. **Scheduling Production and Service System:** Operation Planning and Scheduling System; Aggregate planning system; Master Scheduling and Rough cut Capacity Planning; Operation Scheduling.
4. **Inventory Control and Applications:** Inventory Concepts; Inventory costs; Inventory Models; Inventory control application in Manufacturing.
5. **Material Requirement Planning:** Planning for Materials need; Detailed Capacity Planning; Limitations and applications of MRP; Manufacturing Resource Planning (MRP-II); Purchasing.
6. **Introduction to JIT Manufacturing System**